



Netra t1 4-Stack Memory Upgrade

Addendum

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Part No. 806-5606-10
June 2000, [Revision A](#)

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Installing Four 256 Mbyte Memory Boards

This document tells you how to install a stack of four 256 Mbyte memory boards into the Netra t1 system. If you want to install a single additional 256 Mbyte memory board, follow the instructions in the *Netra t1 Systems Memory Upgrade* document (part number 806-2129-11).



Note – Do not install memory boards in stacks of three. If you do not want to install boards in a 4-stack configuration, you can install them in single-board or 2-stack configurations. In a 2-stack configuration, you can combine Netra t1 memory boards of different capacities (64, 256, or 512 Mbytes).

This document contains the following sections:

- “Materials and Tools Required” on page 2
- “Wearing an Anti-Static Wrist Strap” on page 3
- “Installing the Stack of Four Boards” on page 4

Materials and Tools Required



Note – The boards you must use for the 4-stack memory installation have the part number 370-4155. Other 256 Mbyte memory boards (those with part numbers 370-4096 and 595-5097) cannot be included in a 4-stack configuration. The boards you must use are identifiable by a sticky label saying '4-stack only'.

The packaging containing your 4-stackable 256 Mbyte memory board includes a kit (part number 540-4532-02) containing the following (see FIGURE 1):

- Four square spacers
- Four lock washers
- Four flat washers
- Four long screws (11/16 inch; required only for 4-stack configurations)
- Four round plastic spacers (required only for 2-stack configurations)
- Four short screws (3/16 inch; required only for single-board configurations)
- Four medium length screws (3/8 inch; required only for 2-stack configurations)
- Four medium length screws (3/8 inch; required only for 2-stack configurations)

To install a stack of four boards, you need four memory board packages. To order a single package from your Sun Enterprise Services representative, quote the sales part number X6985A.

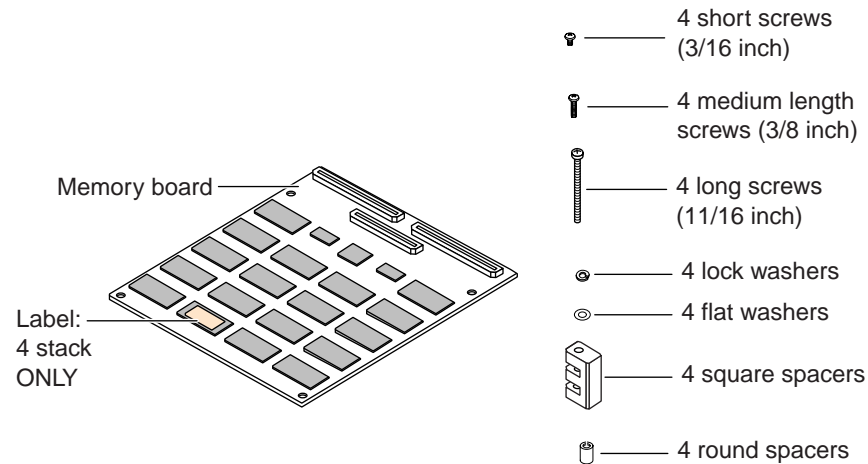


FIGURE 1 The 4-Stackable Memory Board Kit

Wearing an Anti-Static Wrist Strap



Caution – The Netra t1 system contains electronic parts that are extremely sensitive to static electricity. Do not touch any metal parts. Wear an anti-static wrist strap connected to an earthing point before you open the system.

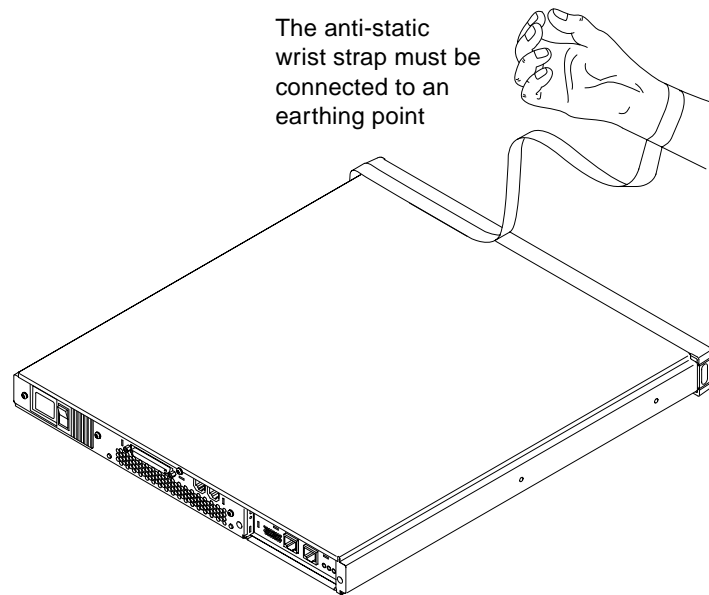


FIGURE 2 Preparing to Open the System Wearing an Anti-Static Wrist Strap

Installing the Stack of Four Boards

1. If your system is new and you have just removed it from its packaging, go straight to Step 3. If your system is currently in use, then:
 - a. Shut down Solaris from the console.
 - b. Turn the power supply switch off.
 - c. Disconnect the power cord or power cords.
 - d. Disconnect all other cables.
2. If you have installed the system into a rack or cabinet, remove it.
3. Remove the rack mount brackets from the side of the system (see FIGURE 3).

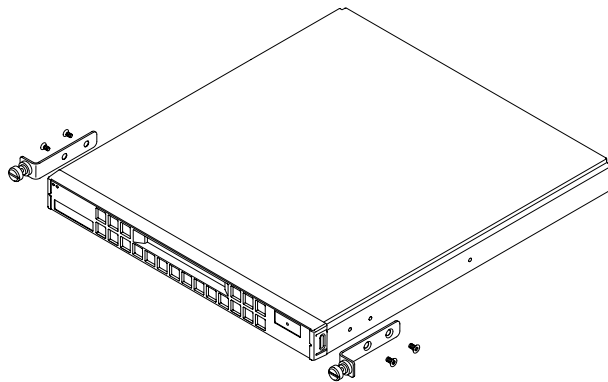


FIGURE 3 Removing the Rack Mount Brackets from the Side of the System

4. Place the unit at an ESD station and make sure you are wearing an anti-static wrist strap connected to an earthing point.



Caution – Before attempting to remove the top cover of the Netra t1 system, make sure that all power cords and all other cables have been disconnected.

5. Remove the system's top cover (see FIGURE 4). To do this:
 - a. Remove the screw at the rear center of the unit.
 - b. Slide the top cover back and lift it off.

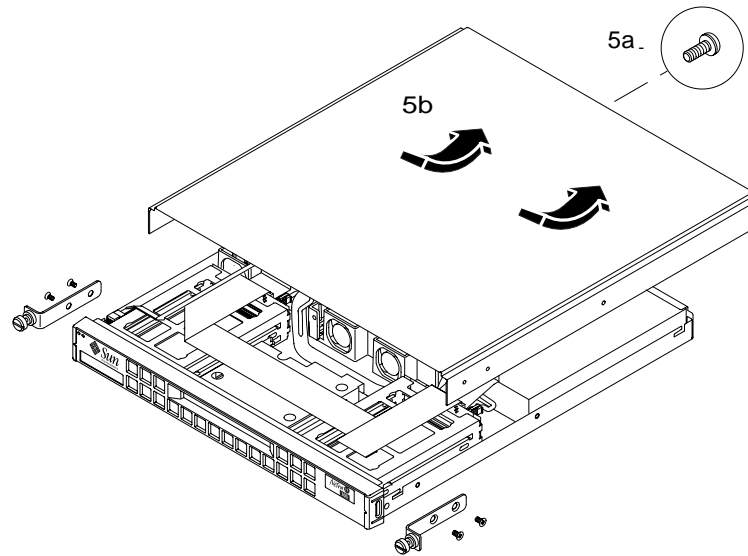


FIGURE 4 Removing the Top Cover of the Netra t1 System

- 6. Lift out the processor cover located in the rear center of the unit (see FIGURE 5).**
Make sure you slide the processor cover tabs from under the rear I/O card before lifting the processor cover away from the system.

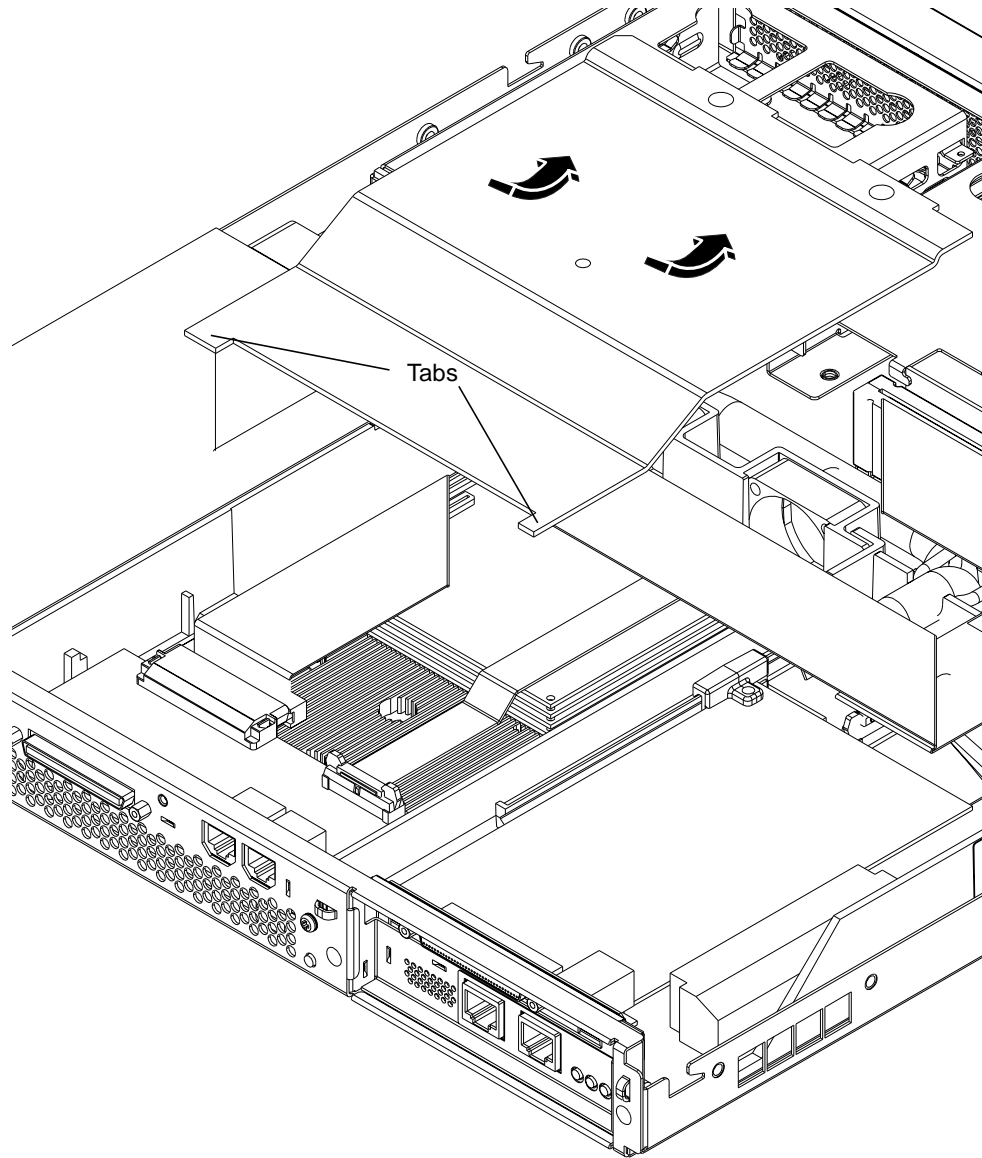


FIGURE 5 Lifting out the Processor Cover

7. Using a Phillips No.1 screwdriver, remove the screws and washers from the base memory board (see FIGURE 6).

If you intend to replace the base memory board, lift out the board that is currently installed. Otherwise, leave the current board seated in the connectors on the motherboard but not screwed in.



Note – If you are making a 4-stack (1 Gbyte) configuration, the base board and all other boards in the stack must be of part number 370-4155.

For purposes of illustration, the board you use as the base board will be called Board A, Board B will be the board you put on top of Board A, Board C will be the one you put on top of Board B, and Board D will be the one at the top of the stack.

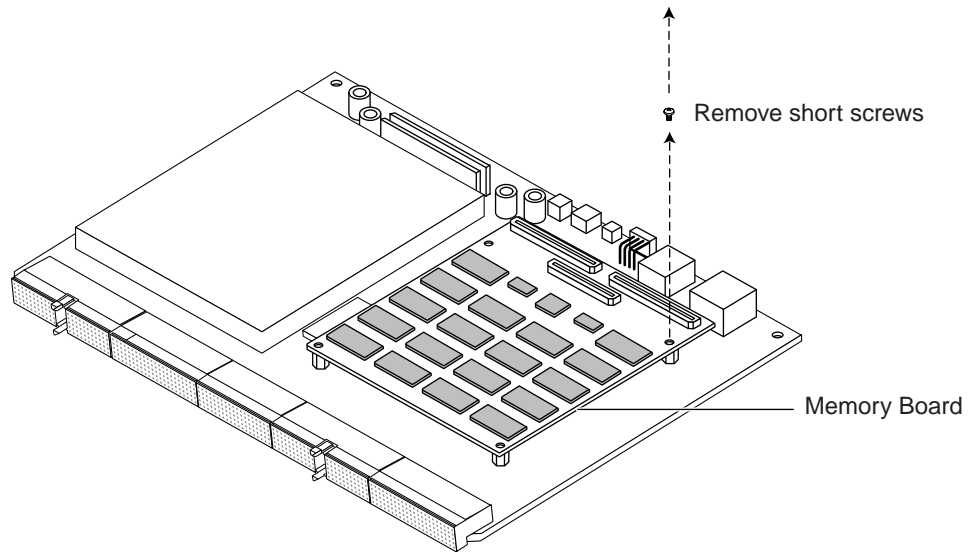


FIGURE 6 Removing the Mounting Screws from the Currently Installed Memory Board

8. If you are replacing the currently installed base memory board, align the connectors of the new base board with the memory board sockets on the Netra t1's motherboard.

Press home fully the connectors using your thumbs. The connectors need to be properly seated (see FIGURE 7). You might find it helpful to seat the middle connector properly before the other two connectors.

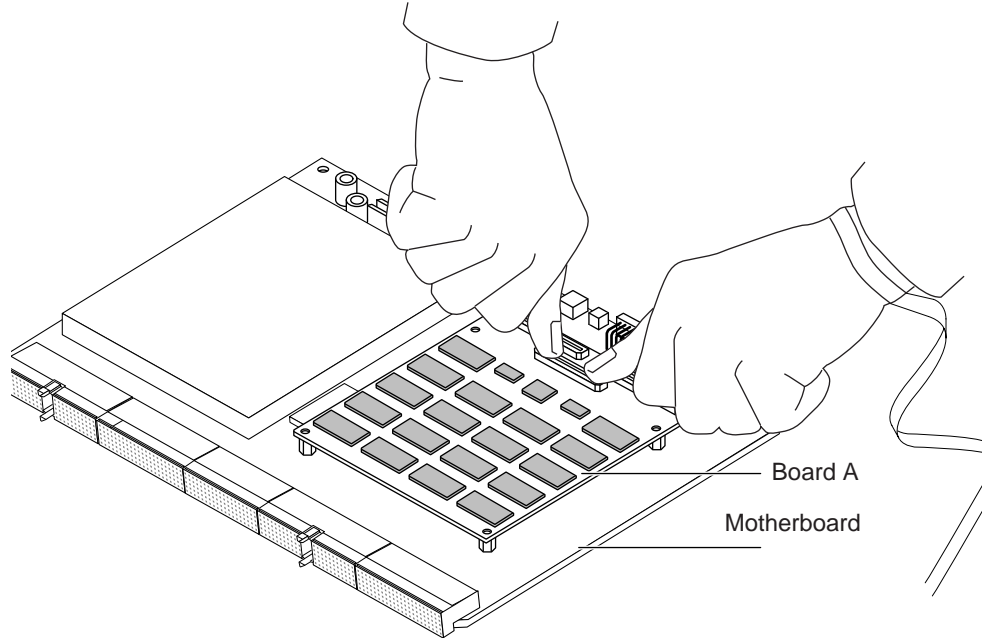


FIGURE 7 Seating a Single Memory Board on the Netra t1's Motherboard



Caution – Although it is necessary for the connectors to be properly seated, you must not apply excessive pressure to them. If you do, you might cause microfractures on the motherboard which can impair the operation of the board.

9. Position the connectors of one memory board (Board C) above the memory board connector sockets of another memory board (Board B) in a piggy-back style, then press down the connectors using your thumbs until they are seated.

You might find it helpful to seat the middle connector properly first. See FIGURE 8. Put together Boards B and C first, *before* you connect them to Board A.



Caution – Place the memory boards on ESD foam during this assembly.

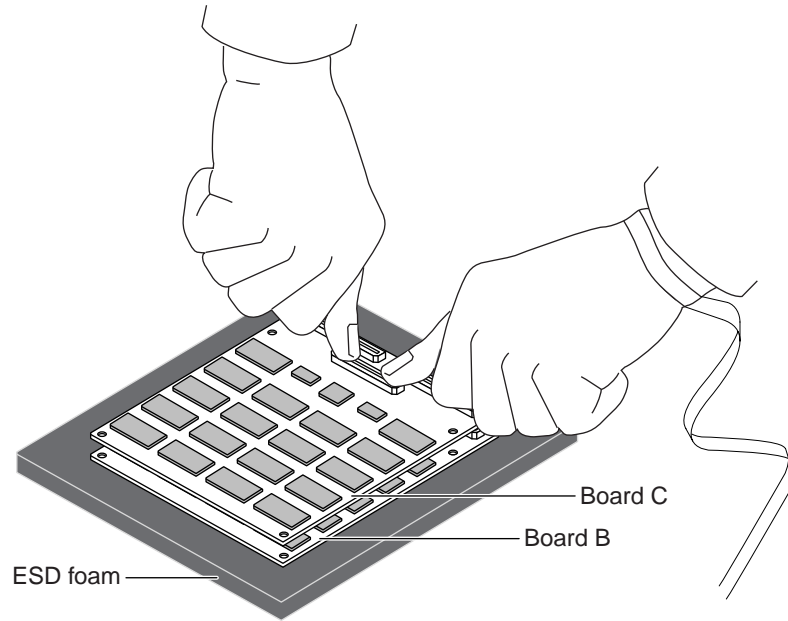


FIGURE 8 Stacking the Third Memory Board on Top of the Second

10. Insert the four plastic spacers and align them with the mounting holes on memory Boards B and C (see FIGURE 9).

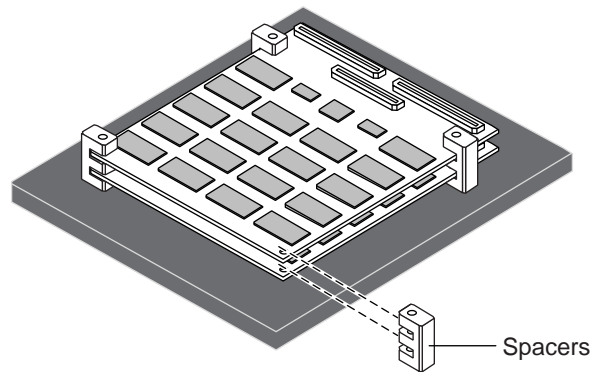


FIGURE 9 Aligning the Four Plastic Spacers with the Mounting Holes

11. Carefully transport the memory boards (Boards B and C) with spacers onto Board A (see FIGURE 10).

Follow the procedure described in Step 9 to mount the assembled Boards B and C (with spacers inserted) onto memory Board A.

Hold the spacers, if necessary, so that they do not move out of position.

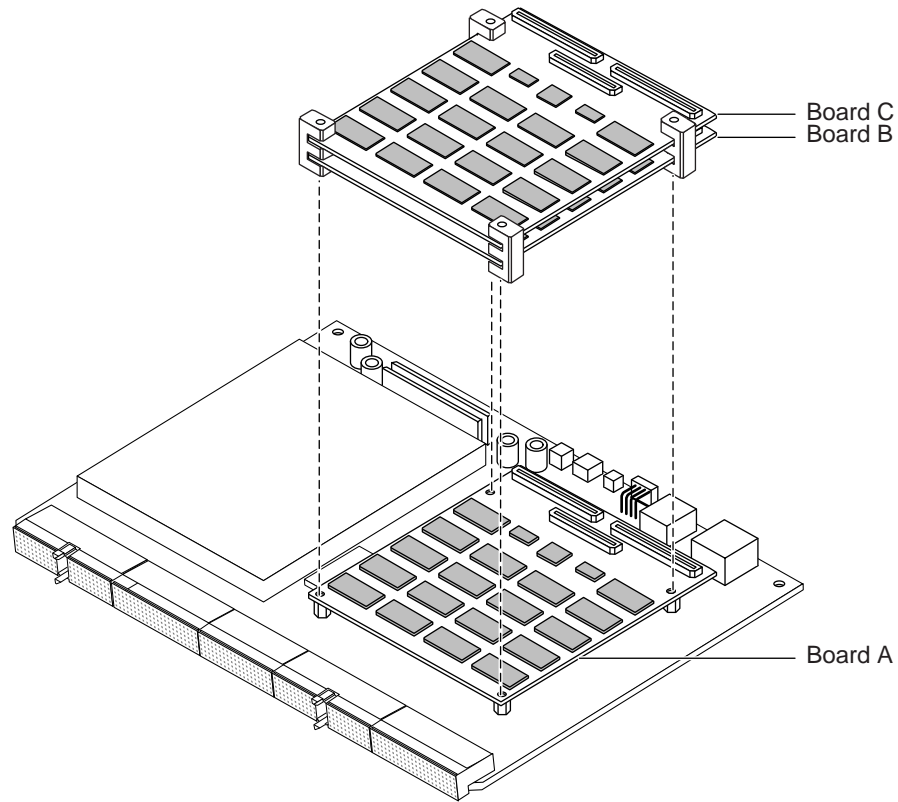


FIGURE 10 Mounting the Second and Third Boards onto the Base Memory Board

12. Align the connectors of Board D to the sockets of Board C, but do not press down yet to seat Board D (see FIGURE 11).

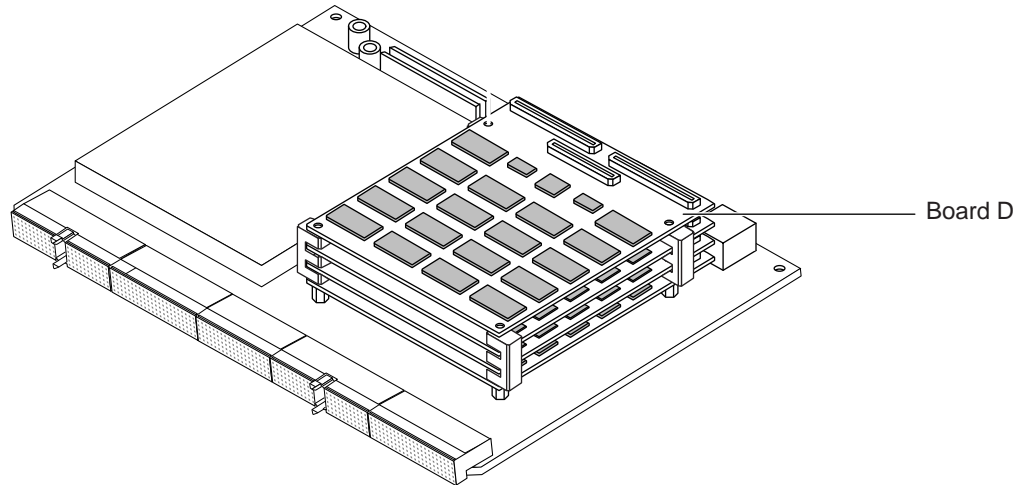


FIGURE 11 Four Stacked Memory Boards on the Netra t1 Motherboard

13. **Insert each screw into one lock washer and one flat washer, then drop the screws (with the washers) into the aligned mounting holes of the memory boards and the plastic spacers (see FIGURE 12).**

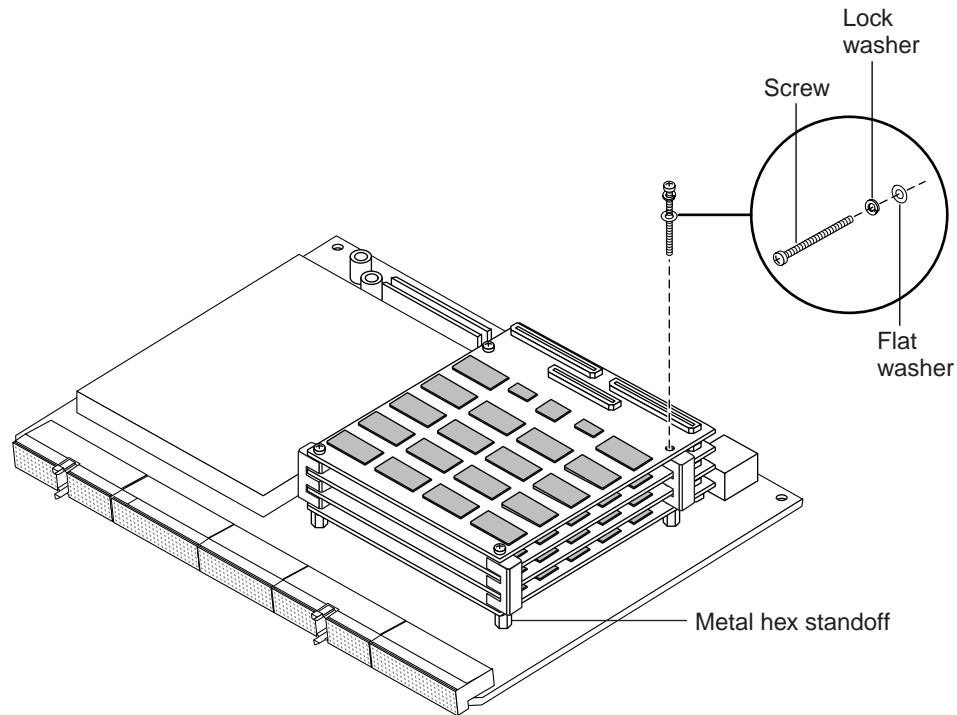


FIGURE 12 Dropping the Screws into the Aligned Mounting Holes

14. **Using your fingers, turn all four screws until they take up just the first one or two threads in the metal hex standoffs (see FIGURE 12)**

This helps to align the connectors of Board D with the sockets of Board C, preventing any sideways movement of the stack when you press home the connectors of Board D.

15. **Now press home fully the connectors of Board D. You might find it helpful to seat the middle connector properly before the other two connectors.**

16. **Tighten the screws into the metal hex standoffs so that the stack sits firmly on the motherboard.**

Tighten each screw a little at a time to avoid bending and possibly damaging any of the boards. (The recommended tightening torque is 0.3 Nm.)

17. **Replace the processor cover which you removed in Step 6.**

Make sure that you put the tabs on the processor cover back into their original position underneath the rear I/O card.